

Amendments to the Claims:

This listing of claims will replace all prior version, and listings, of claims in the application.

1. (currently amended) A warehousing system for palletized cargo, said palletized cargo being sized to fill either two-abreast or singly the width of a standard dry van, said system comprising:

a feed conveyer for bringing said palletized cargo to or from said system;

a plurality of storage racks for storing said palletized cargo;

a loading/unloading conveyer for bringing said palletized cargo from or to at least one loading/unloading dock;

said feed conveyer, said storage racks and said loading/unloading conveyer each comprising an elongate, generally horizontal end portion having sufficient length to support rows of multiple pallets that form ~~individual~~ full loads of said palletized cargo that will fill the length of a standard highway dry van;

a traveling conveyer for carrying said ~~individual~~ full loads of said palletized cargo;

said traveling conveyer comprising:

an elongate, generally horizontal deck having sufficient length to support said rows of multiple pallets that form said ~~individual~~ full loads that will fill the length of a standard highway dry van; and

means for propelling said rows of pallets in first and second generally horizontal directions relative to said elongate deck so as to be able to move said rows of multiple pallets that form said full loads of said palletized cargo simultaneously off either of first or second ends of said elongate deck; and

means for selectively moving said traveling conveyer, with said rows of multiple pallets that form said full loads of said palletized cargo supported on said elongate deck thereof, between:

(i) a location in which said elongate deck of said traveling conveyor is aligned longitudinally with said elongate end portion of said feed conveyor, for longitudinally receiving or discharging said rows of multiple pallets that form said individual full loads of said palletized cargo simultaneously to or from said feed conveyor;

(ii) locations in which said elongate deck of said traveling conveyor is aligned longitudinally with said elongate end portions of said storage racks, for longitudinally receiving or discharging said rows of multiple pallets that form said individual full loads of said palletized cargo simultaneously from or to said storage racks; and

(iii) a location in which said elongate deck of said traveling conveyor is aligned longitudinally with said elongate end portion of said loading/unloading conveyor, for longitudinally receiving or discharging said individual rows of multiple pallets that form said full loads of said palletized cargo simultaneously from or to said loading/unloading conveyor[[;]]

~~whereby said traveling conveyor is selectively moveable, with said rows of multiple pallets that form said individual loads of said palletized cargo supported on said elongate deck thereof, between positions in which said rows of multiple pallets can be received by said traveling conveyor longitudinally from or discharged by said traveling conveyor longitudinally to said elongate end portions of said feed conveyor, said storage racks, and said loading/unloading conveyor.~~

2. (original) The warehousing system of claim 1, wherein said storage racks are stacked in tiers at a plurality of elevations.

3. (currently amended) The warehousing system of claim 2, wherein said means for selectively moving said traveling conveyor ~~further~~ comprises:

means for elevating said deck of said traveling conveyor to heights at which said deck of said traveling conveyor is level with said storage racks in said stacked tiers.

4. (currently amended) The warehousing system of claim 3, wherein said means for elevating said deck of said traveling conveyor comprises:

a scissor-jack mechanism mounted to said ~~of said conveyor~~ deck of said traveling conveyor for selectively raising and lowering said deck to said heights level with said storage racks.

5. (currently amended) The warehousing system of claim 3, wherein said means for selectively moving said traveling conveyor further comprises:

a wheeled chassis having said traveling conveyor mounted thereon; and
at least one track for guiding said wheeled chassis between said locations in which said palletized cargo is received or discharged.

6. (original) The warehousing system of claim 1, wherein said feed conveyor further comprises:

a branch portion that diverges from a main portion of said feed conveyor, for bringing said cargo directly to or from said loading/unloading conveyor without passing to said traveling conveyor.

7. (original) The warehousing system of claim 6, wherein said feed conveyor further comprises:

means for selectively diverting said palletized cargo from said main portion of said feed conveyor onto said branch portion of said conveyor.

8. (original) The warehousing system of claim 7, wherein said means for selectively diverting said palletized cargo onto said branch portion of said feed conveyor comprises:

a sweep arm pivotally mounted proximate a junction of said main and branch portions of said feed conveyor; and

means for selectively extending said sweep arm from a retracted position in which said palletized cargo is permitted to pass along said main portion to said traveling conveyor, to an extended position in which said sweep arm redirects said cargo along said branch portion of said feed conveyor.

9. (original) The warehousing system of claim 6, wherein said branch portion of said feed conveyor comprises:

a bypass segment connecting said branch portion of said feed conveyor and said loading/unloading conveyor; and

means for displacing said bypass segment so as to form a gap between said branch portion of said feed conveyor and said loading/unloading conveyor, for receiving said traveling conveyor therein when said traveling conveyor is in said location for receiving or discharging said palletized cargo from or to said loading/unloading conveyor.

10. (original) The warehousing system of claim 1, wherein said at least one loading/unloading dock is an automated cargo loading/unloading system comprising:

a rigid, extensible dock member having an upper surface for supporting a load of palletized cargo;

means for extending said dock member into an interior of a transport vehicle so as to carry said load of palletized cargo into or out of said transport vehicle en masse; and

means for selectively restraining said load of palletized cargo within said interior of said vehicle as said extensible dock member is withdrawn therefrom.

11. (original) The warehousing system of claim 10, wherein said extensible dock member comprises:

a beveled leading edge for sliding under a load of palletized cargo within said interior of said transport vehicle as said dock member is extended therein.

12. (original) The warehousing system of claim 10, wherein said automated cargo loading/unloading system further comprises:

means for selectively transferring said palletized cargo from said loading/unloading conveyor to said extensible dock member.

13. (original) The warehousing system of claim 12, wherein said means for selectively transferring said palletized cargo from said loading/unloading conveyor to said extensible dock member comprises:

a push plate positioned proximate an inner end of said extensible dock member and on an opposite side of said loading/unloading conveyor therefrom; and

means for selectively extending said push plate so as to push said palletized cargo off of said loading/unloading conveyor and onto said inner end of said extensible dock member.

14. (original) The warehousing system of claim 10, wherein said automated cargo loading/unloading system further comprises:

means for selectively transferring said palletized cargo from said extensible dock member to said loading/unloading conveyor.

15. (original) The warehousing system of claim 14, wherein said means for selectively transferring said palletized cargo from said extensible deck member to said loading/unloading conveyor comprises:

an unloading paddle mounted to said extensible dock member;

means for selectively moving said unloading paddle from a retracted position in which said unloading paddle is positioned beneath an upper surface of said extensible dock member, to a deployed position in which said unloading

paddle projects above said upper surface of said extensible dock member proximate an outer end of said dock member; and

means for translating said unloading paddle in said deployed position from said outer end of said extensible dock member to proximate an inner end of said deck member, so as to push said palletized cargo off of said extensible dock member and onto said loading/unloading conveyor at said inner end of said dock member.

16. (currently amended) An automated cargo loading/unloading system, comprising:

a rigid, extensible dock member having an upper surface for supporting a load of palletized cargo, said extensible deck member comprising a thin, rigid plate member having said upper surface formed thereon;

means for extending said dock member into an interior of a transport vehicle so as to carry said load of palletized cargo into or out of said transport vehicle en masse;

means for selectively restraining said load of palletized cargo within said interior of said vehicle as said extensible dock member is withdrawn therefrom; and

means for selectively transferring said palletized cargo from said extensible dock member to a loading/unloading conveyor, comprising:

an unloading paddle mounted to said extensible dock member, said unloading paddle extending across substantially a full width of said upper surface of said dock member;

means for selectively moving said unloading paddle from a retracted position in which said unloading paddle is lowered below said thin, rigid plate member so as to be positioned beneath ~~[[an]]~~ said upper surface of said extensible dock member, to a deployed position in which said unloading paddle projects is raised over an outer end of said thin,

rigid plate member so as to be positioned above said upper surface of said extensible dock member ~~proximate an outer end of said dock member~~; and

means for translating said unloading paddle in said deployed position from said outer end of said ~~extensible dock~~ plate member to proximate an inner end of said ~~[[deck]]~~ plate member with said unloading paddle extending across substantially said full width of said upper surface of said extensible dock member, so as to push said palletized cargo off of said ~~extensible~~ dock member and onto said loading/unloading conveyor at said inner end of said dock member.

17. (currently amended) The automated cargo loading/unloading system of claim 16, wherein said ~~extensible dock~~ thin, rigid plate member comprises:

a beveled leading edge for sliding under a load of palletized cargo within said interior of said transport vehicle as said dock member is extended therein.

18. (canceled)

19. (canceled)

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21. (canceled)

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23. (canceled)

24. (canceled)

25. (canceled)

26. (canceled)

27. (new) The automated cargo loading/unloading system of claim 16, wherein said means for selectively moving said unloading paddle from said retracted position to said deployed position comprises:

first and second extension arms mounted to lateral ends of said unloading paddle so as to extend over side edges of said rigid plate member; and

first and second chain drives mounted to said loading/unloading dock generally below said side edges of said rigid plate member, said first and second chain drives comprising chains to which ends of said extension arms are mounted and sprockets located proximate and below said outer end of said rigid plate member, so that in response to said chains passing over said sprockets said extension arms mounted thereto rotate said unloading paddle up and over said outer end of said thin, rigid plate member, from said position in which said unloading paddle is below said upper surface of said loading/unloading dock to said deployed position in which said unloading paddle is above said upper surface of said dock.

28. (new) The automated cargo loading/unloading system of claim 27, wherein said means for translating said unloading paddle in said deployed position from said outer end of said thin, rigid plate member to proximate said inner end thereof comprises:

elongate upper runs of said chains of said first and second chain drives having said extension arms mounted thereto, that are located below and extend generally parallel to said side edges of said rigid plate member, that in response to rotation of said drive sprockets draw said unloading paddle over said upper surface of said loading/unloading dock.

29. (new) A warehousing system for palletized cargo, said palletized cargo being sized to fill either two-abreast or singly the width of a standard dry van, said system comprising:

a feed conveyer for bringing said palletized cargo to or from said system;
a plurality of storage racks for storing said palletized cargo;
a loading/unloading conveyer for bringing said palletized cargo from or to
at least one loading/unloading dock;

said feed conveyer, said storage racks and said loading/unloading
conveyor each comprising an elongate, generally horizontal end portion having
sufficient length to support rows of multiple pallets that form full loads of said
palletized cargo that will fill the length of a standard highway dry van;

a traveling conveyer for carrying said full loads of said palletized cargo;
said traveling conveyer comprising:

an elongate, generally horizontal deck having sufficient length to
support said rows of multiple pallets that form said full loads that will fill
the length of a standard highway dry van; and

a conveyor mechanism for propelling said rows of pallets in first
and second generally horizontal directions relative to said elongate deck so
as to be able to move said rows of multiple pallets that form said full loads
of said palletized cargo simultaneously off either of first or second ends of
said elongate deck, said conveyor mechanism being selected from the
group consisting of:

belt conveyors;
roller conveyors; and
combinations thereof; and

means for selectively moving said traveling conveyer, with said
rows of multiple pallets that form said full loads of said palletized cargo
supported on said elongate deck thereof, between:

(i) a location in which said elongate deck of said traveling
conveyor is aligned longitudinally with said elongate end portion of said
feed conveyer, for longitudinally receiving or discharging said rows of
multiple pallets that form said full loads of said palletized cargo
simultaneously to or from said feed conveyer;

(ii) locations in which said elongate deck of said traveling conveyor is aligned longitudinally with said elongate end portions of said storage racks, for longitudinally receiving or discharging said rows of multiple pallets that form said full loads of said palletized cargo simultaneously from or to said storage racks; and

(iii) a location in which said elongate deck of said traveling conveyor is aligned longitudinally with said elongate end portion of said loading/unloading conveyor, for longitudinally receiving or discharging said rows of multiple pallets that form said full loads of said palletized cargo simultaneously from or to said loading/unloading conveyor.